

Final script from "Adult Immunization Update" satellite broadcast, June 26, 2003.

Tetanus and diphtheria segment.

Tetanus and diphtheria are not common in the United States, but adults are the ones most commonly affected. Although rare now, these diseases could again become a problem if we let our guard down.

Both tetanus and diphtheria are diseases caused by toxins produced by bacteria. Protection requires antibodies against these toxins. More than 50% of all adults 20 years of age and older in the U.S. do not have protective levels of antibodies against tetanus and diphtheria toxins. Many adults 60 years of age and older have not received a primary series of tetanus and diphtheria containing vaccine and many adults of all ages do not receive routine Td booster doses every ten years.

In recent years, about 40 cases of tetanus have occurred each year in the U.S. Most cases occurred following an acute injury, such as a puncture or laceration. More than half of these injuries were minor cuts and scrapes that occurred in and around the house, or during common activities such as gardening or camping. Some cases of tetanus occurred in people with chronic wounds, like decubitus ulcers, or without an identifiable wound at all. Almost all of these cases could have been prevented by vaccine.

Diphtheria, which is spread from person-to-person, can also be fatal if left untreated. The incidence of diphtheria is very low in this country. Fewer than 6 cases of diphtheria have been reported each year in the U.S. since 1980. Only 26 cases were reported from 1990 through 2001, and most cases- more than half- occurred among adults. The lack of cases, however, does not mean the organism is gone. The organism is probably still circulating in some areas of the United States and diphtheria is still common in many countries outside the United States.

Combination tetanus and diphtheria toxoid consists of formalin inactivated toxins. A full series of TD induces protective antibody in nearly everyone and the duration of protection following a complete series is at least ten years. Tetanus toxoid should always be administered with

diphtheria toxoid, as TD for people seven years of age and older. Single antigen tetanus toxoid IS available, but does not offer protection against diphtheria, so it's use is not recommended. Monovalent tetanus toxoid should only be used when there is a medical contraindication to the diphtheria component. Monovalent diphtheria toxoid is not available.

The primary series consists of 3 doses of adult Td, with the first two doses separated by at least four weeks, and the third dose given at six to twelve months after the second. A booster dose should be routinely administered every ten years thereafter.

Only DOCUMENTED doses of Td, or any other vaccine, should be counted. Many adults do not know their immunization history. If you encounter a patient with no documented history of tetanus and diphtheria immunizations, give the person a dose of Td and then attempt to locate a record. If a record cannot be located, then the remaining doses should be given to complete the series.

Adverse reactions following Td are not common. As with other inactivated vaccines, the most common adverse reactions following Td are local reactions, including redness, tenderness and induration at the site of injection. Exaggerated local reactions, or so-called hypersensitivity reactions, are occasionally reported following a tetanus vaccination. These unusual reactions, known as Arthus type reactions, typically present as extensive painful swelling, often extending from the shoulder to the elbow. Persons experiencing these severe reactions usually have very high serum tetanus antitoxin levels. These reactions are NOT contraindications for further doses, but do not give these persons routine or emergency booster doses of Td more frequently than every ten years. Systemic symptoms, such as fever, are not common following Td, and severe reactions are rare. Allergic reactions are also rare.

Both tetanus and diphtheria toxoids are inactivated, so they have few true contraindications or precautions. As with other inactivated vaccines, the only contraindication to Td is a severe allergic reaction to a vaccine component or following a prior dose. Moderate or severe acute illness is a precaution, and vaccination should be deferred until the acute condition improves.

You may have encountered older individuals who claim to be allergic to tetanus shots. Many of them describe severe reactions to something they were given for tetanus years ago. The allergic reactions these people had may have actually been serum sickness, a reaction to equine antitoxin. Equine antitoxin was the only product available for the prevention of tetanus prior to the mid 1940s. It was used for post exposure prophylaxis until the late 1950s, when tetanus immune globulin was introduced. Tetanus toxoid has never contained any horse protein. If you come across someone with a history like this, don't just write it off as allergy to tetanus toxoid. Try to find out when it happened, the nature of the reaction, and the circumstances. If the reaction seems to be truly anaphylactic, you should strongly consider referring your client to an allergist for evaluation. No one should be allowed to walk around susceptible to tetanus. That can be a fatal error.